THEORETICAL POPULATION BIOLOGY

AN INTERNATIONAL JOURNAL

EDITORS

J. F. Crow
S. Karlin
N. Keyfitz
E. O. Wilson

ASSOCIATE EDITORS

N. T. J. Bailey
W. Bodmer
W. H. Bossert
L. L. Cavalli-Sforza
W. J. Ewens
L. Henry
J. M. Hoem
C. Holling
M. Kimura
K. Kojima
R. Levins
R. C. Lewontin
R. MacArthur
J. McGregor
G. Malécot
P. A. P. Moran
J. Pollard
A. Robertson
A. Rogers
M. C. Sheps
G. Simchen
L. Slobodkin
J. Vandermeer

MANAGING EDITOR

M. Feldman

VOLUME 3 · 1972

ACADEMIC PRESS
New York and London

Copyright © 1972 by Academic Press, Inc.

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

Printed by the St Catherine Press, Ltd., Bruges, Belgium

CONTENTS OF VOLUME 3

Number 1, March 1972

Mindel C. Sheps and Jane A. Menken. Distribution of Birth Intervals According of the Sampling Frame 1

William G. Hill. Probability of Fixation of Genes in Populations of Variable Size 27

C. Matessi and R. Cori. Models of Population Genetics of Batesian Mimicry 41

R. G. Potter. Births Averted by Induced Abortion: An Application of Renewal Theory 69

W. J. Ewens. The Sampling Theory of Selectively Neutral Alleles . . 87

S. Karlin and J. McGregor. Addendum to a Paper of W. Ewens . . 113

Errata 117

News and Information 118

Number 2, June 1972

Joel E. Cohen. Markov Population Processes as Models of Primate Social and Population Dynamics 119

Louis Henry. Nuptiality 135

W. J. Ewens. Concepts of Substitutional Load in Finite Populations . 153

Samuel H. Preston. Interrelations Between Death Rates and Birth Rates 162

Samuel Karlin and James McGregor. Application of Method of Small Parameters to Multi-Niche Population Genetic Models 186

Samuel Karlin and James McGregor. Polymorphisms for Genetic and Ecological Systems with Weak Coupling 210

News and Information 239

Errata 240

Number 3, September 1972

John H. Gillespie. The Effects of Stochastic Environments of Allele Frequencies in Natural Populations 241

Daniel Serant and Michel Villard. Linearization of Crossing-Over and Mutation in a Finite Random-Mating Population 249

Ilan Eshel. On the Neighbor Effect and the Evolution of Altruistic Traits 258

William G. Hill. Effective Size of Populations with Overlapping Generations 278
J. Haigh and J. Maynard Smith. Can There be More Predators Than Prey? 290
Charles J. Mode. A Study of a Malthusian Parameter in Relation to Some Stochastic Models of Human Reproduction 300
Marcus W. Feldman. Selection for Linkage Modification: I. Random Mating Populations 324
Paul Yu. Some Host Parasite Genetic Interaction Models 347
Prithwis Das Gupta. On Two-Sex Models Leading to Stable Populations 358
Erratum 376

Number 4, December 1972

Brian Charlesworth. Selection in Populations with Overlapping Generations. III. Conditions for Genetic Equilibrium 377
A. C. Trajstman and G. A. Watterson. A Note on a First Passage Probability Found in Population Genetic Models 396
Joel E. Cohen. When Does a Leaky Compartment Model Appear to Have no Leaks? 404
Nira Richter-Dyn and Narendra S. Goel. On the Extinction of a Colonizing Species 406
H. A. Guess and W. J. Ewens. Theoretical and Simulation Results Relating to the Neutral Allele Theory 434
G. L. Yang. On the Probability Distributions of Some Stochastic Epidemic Models 448
Masatoshi Nei and Marcus W. Feldman. Identity of Genes by Descent Within and Between Populations Under Mutation and Migration Pressures 460
J. Hillel, G. Simchen, and J. L. Jinks. Generalised Selfing Series as an Experimental Design: I. Theory 466
J. A. Sved. Heterosis at the Level of the Chromosome and at the Level of the Gene 491
G. Namkoong. Persistence of Variances for Stochastic, Discrete-Time, Population Growth Models 507
Author Index 519